

WHAT IS CLAIMED IS:

1. An access point apparatus for a terminal locating system for determining a location of a terminal on the basis of a reception timing at which a radio packet signal sent from said terminal is received at said access point apparatus,

said access point apparatus comprising:

a signal receiving unit for receiving said radio packet signal to thereby generate a received signal;

a received signal memory for storing said received signal;

a packet detecting unit for detecting a packet contained in said generated received signal;

a received signal memory control unit for performing a received signal write control for writing said received signal in said received signal memory from said signal receiving unit and a read control for reading out said received signal from said received signal memory; and

a clock unit for associating said received signal and a reception timing in said access point apparatus,

wherein said received signal memory control unit is so arranged as to perform such control that said received signal is written in said received signal memory sequentially from a first address and after writing of said received signal in said received signal

memory at a second address, said received signal is again written in said received signal memory sequentially from said first address while writing of said received signal in said received signal memory is stopped in response to detection of a packet contained in said received signal by said packet detecting unit, and

wherein said radio packet signal reception timing is determined on the basis of said readout received signal and the timing in said access point apparatus.

2. An access point apparatus according to claim 1,

wherein said packet detecting unit is so designed as to generate a packet detection signal by detecting a leading edge of the packet contained in said received signal.

3. An access point apparatus according to claim 2,

wherein said received signal memory control unit is so arranged as to control such that the received signal is written in said received signal memory at a third address at a timing when said packet detection signal arrives from said packet detecting unit, writing of said received signal being further continued, and after writing of said received signal has been continued up to an address immediately preceding to said third address, writing of said

received signal in said received signal memory from said signal receiving unit is stopped.

4. An access point apparatus according to claim 1,

wherein said packet detecting unit is so designed as to generate a packet detection signal when a trailing edge of the packet contained in said received signal is detected.

5. An access point apparatus according to claim 4,

wherein said received signal memory control unit is so arranged as to control such that after the received signal has been written in said received signal memory at a timing when said packet detection signal arrived from said packet detecting unit, writing of said received signal in said received signal memory from said signal receiving unit is stopped.

6. An access point apparatus according to claim 1,

wherein said packet detecting unit is so designed as to generate a packet detection signal by detecting the packet contained in said received signal at an intermediate portion of said packet.

7. An access point apparatus according to claim 6,

wherein said received signal memory control unit is so arranged as to control such that the received signal is written in said received signal

memory at a timing when said packet detection signal arrives from said packet detecting unit, and after continuing to write said received signal of a predetermined length, writing of said received signal in said received signal memory from said signal receiving unit is stopped.

8. An access point apparatus according to claim 1,

wherein said reception memory control unit is so arranged as to determine a start address or an end address for reading out the received signal from said received signal memory or both of said addresses on the basis of the address at which said writing of the received signal is stopped.

9. An access point apparatus according to claim 1,

wherein said received signal read out from said received signal memory and the time in said access point apparatus are transmitted to a server connected to a plurality of said access point apparatuses and designed for performing detection of said reception timing and a terminal locating arithmetic operation for determining location of said terminal.

10. An access point apparatus according to claim 1,

wherein detection of said reception timing is performed to transmit the detected reception timing to a server connected to a plurality of said access point

apparatuses and designed for performing a terminal locating arithmetic operation for determining location of said terminal.

11. An access point apparatus according to claim 1,

wherein said received signal memory is so designed that a memory capacity not exceeding a double size of said packet signal is allocated for storing said packet signal.

12. A wireless terminal locating method for determining a location of a wireless terminal on the basis of a reception time at which a packet signal sent from said wireless terminal is received by an access point station, including a memory for holding said received signal comprising the steps of:

writing said received signal in said memory sequentially from a first address thereof,

continuing writing of the received signal again from said first address when said received signal has been written up to a second address inclusive;

stopping writing of said reception timing at a third address determined on the basis of a timing when a packet signal sent from said wireless terminal is detected in said received signal;

reading out said written received signal from a fourth address determined on the basis of said detection timing;

measuring a reception timing of said packet

by extracting said packet signal from the received signal read out; and

arithmetically determining the location of said wireless terminal based on said reception timing.

13. A wireless terminal locating method according to claim 12,

wherein detection of said packet signal is performed on the basis of received power of said received signal.

14. A wireless terminal locating method according to claim 13,

wherein detection of said packet signal is performed on the basis of a result of measurement of said received power over a predetermined period.

15. A wireless terminal locating method according to claim 12,

wherein detection of said packet signal is realized by detecting start of reception of said packet signal or alternatively by detecting end of reception of said packet signal.

16. A wireless terminal locating method according to claim 15,

wherein detection of said packet signal is performed on the basis of received power of said received signal.